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Abstract

UTILIZATION OF RESEARCH REACTORS AT TROMBAY

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The Atomic Energy Establishment at Trombay has 3 operating research reactors: "Apsara" (1 MW) date of criticality - August 1956, "Canada-India Reactor" (40 MW) date of criticality - January 1961, "Zerlina" (zero energy reactor for lattice investigations and new assemblies) date of criticality - January 1961. These research reactors have now been working at their full capacity for the past few years and have been utilised for research in nuclear physics, solid state physics, nuclear chemistry, radiation damage chemistry and activation analysis. A brief description of the utilisation of the first two reactors for studies in fission physics and chemistry, lattice dynamics, magnetic structure and crystallography and neutron thermalisation is given. These reactors have also been used for studies in radiation damage, particularly to organic coolants. Other uses have been for the production of short-lived isotopes for studies in nuclear spectroscopy. Work done using the Zerlina reactor for the study of lattice investigations using rod clusters etc. is also described.